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मानक

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Mazdoor Kisan Shakti Sangathan

“The Right to Information, The Right to Live”

“पुराने को छोड़ नये के तरफ”

Jawaharlal Nehru

“Step Out From the Old to the New”

IS 7507 (1974): Forceps, Stone, Bladder [MHD 1: Surgical Instruments]



“ज्ञान से एक नये भारत का निर्माण”

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“Invent a New India Using Knowledge”



“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

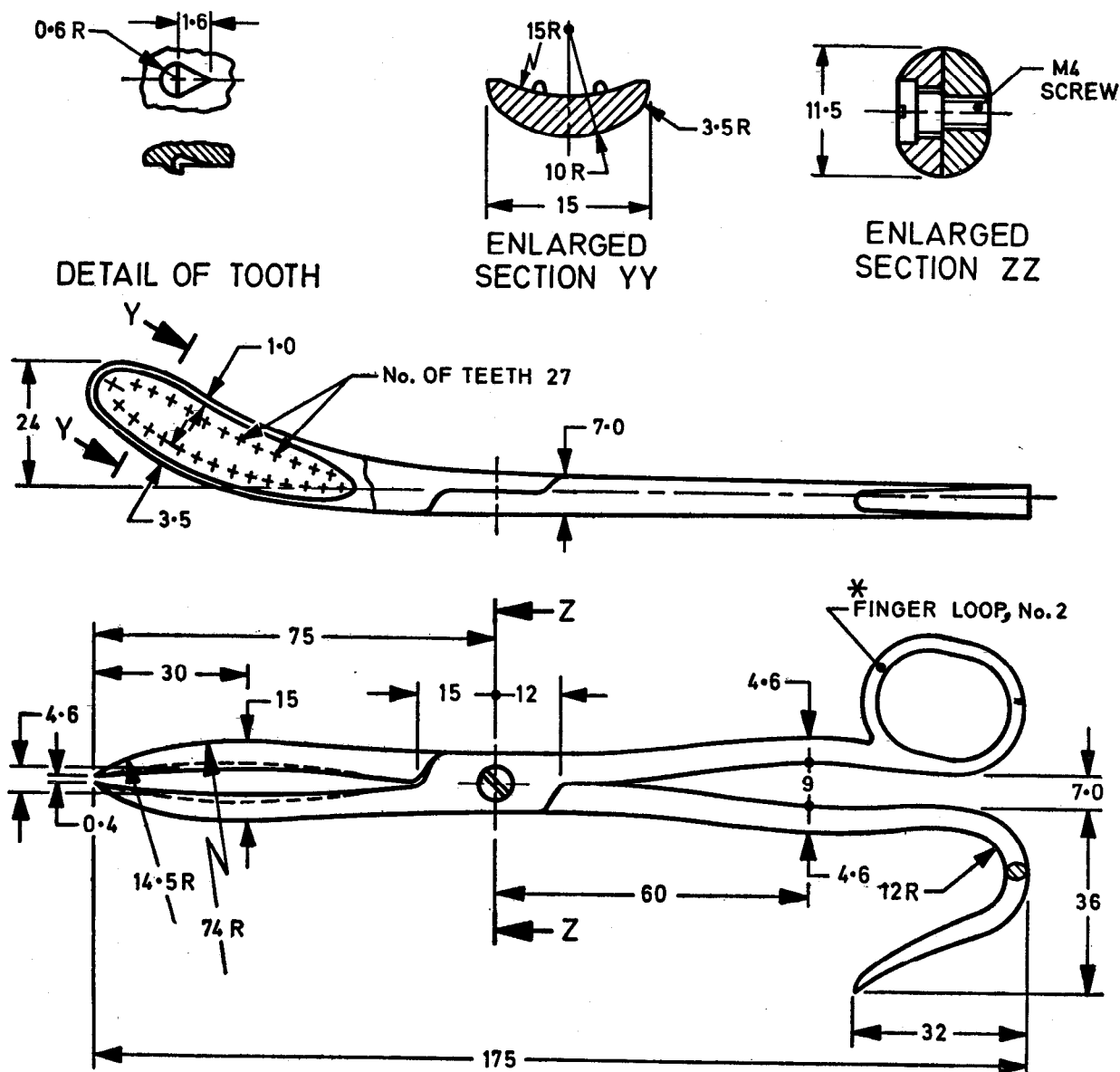
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Indian Standard
**SPECIFICATION FOR
FORCEPS, STONE, BLADDER**

1. **Scope** — Dimensional and other requirements for bladder stone forceps, used in general surgery.
2. **Shape and Dimensions** — As shown in Fig. 1.



* See IS : 3642-1966 'General requirements for surgical instruments'.

All dimensions in millimetres.

FIG. 1 FORCEPS, STONE, BLADDER

2.1 **Joint** — Shall be screw recessed type conforming to 6 of IS : 3642-1966.

2.2 **Finger Loop** — Shall conform to Size 2 of IS : 3642-1966. On the thumb side the forceps shall have an open loop as shown in Fig. 1.

3. Material — Stainless steel conforming to Designation 20Cr13 or 30Cr13 of IS : 6603-1972 'Specification for stainless steel bars and flats'.

4. Workmanship and Finish

4.1 The surfaces, except the concave surface, of the jaws shall be smooth. All surfaces shall be free from burrs, pits, cracks, scales and other surface defects.

4.2 The concave surface on the jaws shall have teeth as shown in Fig. 1. The teeth shall be semi-sharp.

4.3 The component halves shall move easily, fully and freely at the joint but there shall be no undue play at the joint.

4.4 The forceps shall be polished bright and passivated.

5. Heat Treatment — The forceps shall be hardened and tempered to give a hardness of 380 to 430 HV.

6. Tests

6.1 Rigidity — The rigidity of the forceps shall be tested as given in 6.1.1 and 6.1.2.

6.1.1 Grip a piece of timber 12 mm thick between the jaws of the forceps. By the application of maximum force manually, try to bring together the handles of the forceps. The forceps shall not take a permanent set on completion of the test.

6.1.2 Apply a compressive force of 700 N (70 kgf approximately) at the centre of the handle in such a manner that the force shall tend to press the handles together. The maximum force of 700 N shall be attained gradually, and shall act for two minutes. On completion of the test, the forceps shall show no sign of damage.

6.2 Corrosion Resistance — The instrument shall satisfy the boiling and autoclaving test as mentioned in IS : 7531-1975 'Boiling and autoclaving method of test for corrosion resistance of stainless steel surgical instruments'.

6.2.1 Subject to agreement between the purchaser and the supplier, the instrument may be put to the following test:

Copper Sulphate Test — Scrub the sample with soap and warm water, rinse in hot water and then dip in 95 percent ethyl alcohol. Dry the sample. Immerse in copper sulphate solution at room temperature for 6 minutes and wash off with fresh water or swab with wet cotton wool. Composition of the solution shall be as follows:

Copper sulphate ($\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$)	4.0 g
Sulphuric acid (H_2SO_4) (sp gr 1.84)	10.0 g
Distilled water [see IS : 1070-1960 Specification for water, distilled quality (revised)]	90.0 ml

There shall be no red stains or spots on the sample, but dulling of the polished surface may be permitted.

7. Marking — Mark with the following:

- Manufacturer's name, initials or recognized trade-mark; and
- The words ' Stainless Steel '.

7.1 ISI Certification Marking — Details available with the Indian Standards Institution.

8. Packing — The forceps shall be wrapped in a moisture-proof paper and put in cardboard carton or polyethylene bag. The forceps may also be packed as agreed to between the purchaser and the supplier.